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(71) Applicant (for all designated States except US): ARISTOCRAT LEISURE INDUSTRIES PTY. LTD. [AU/AU]; 71 Longueville Road, Lane Cove, NSW 2066 (AU).			
(72) Inventor; and			
(75) Inventor/Applicant (for US only): BOND, Eugene, Thomas [US/US]; 6329 Lena King Avenue, Las Vegas, NV 89120 (US).			
(74) Agent: F.B. RICE & CO.; 605 Darling Street, Balmain, NSW 2041 (AU).			

(54) Title: SOFTWARE VERIFICATION AND AUTHENTICATION

(57) Abstract

A device for controlling electronic gaming machines comprises a single board computer (SBC) having a microprocessor, memory means, storage means and a ROM (Read Only Memory). The ROM includes: a loader program; verification program; an authentication program; and a presentation program. Additional Mass storage media in communication with the SBC store pre-verified and approved gaming software (program files) and related data files, each of which have a verification signature appended to them. Prior to usage of the gaming software, the program file software or data file is

retrieved by the loader program and checked by the verification program which compares the verification signature with a newly calculated verification signature. If the newly calculated signature matches the verification signature, the requested file is deemed to be intact (a validated image). The verification processes ensure that the file has been retrieved in its entirety and is free from corruption caused by storage media faults. If any corruption has occurred, the control device displays an error and the process is halted. After verification, all pending requests for authorization from authentication agents are processed by a queuing means. Each request includes a set of authentication instructions and a reply destination. After queuing, an authentication interpreter processes the validated image pursuant to the requester's instruction. The presentation program reports the resulting authentication identification to the requested destination which either acknowledges or refuses authentication. If acknowledged, the image is used or executed. If refused, an error is displayed and the process is halted.

